WHAT WE CLAIM IS:

1. A method of scheduling packets for delivery to one of mobile stations and a corresponding base station in a wireless packet network comprising the iterative steps of

calculating channel efficiency for a mobile station and

scheduling packets for delivery to said mobile station or said base station by determining a value of relative weight of said mobile station by a weighting equation, responsive to the calculated channel efficiency.

2. A method as recited in claim 1 further comprising the initial step of measuring channel quality for said mobile station.

3. A method as recited in claim 2 wherein said measured signal quality is determined by calculating effective serving rate.

4. A method as recited in claim 2 wherein said measured signal quality is determined by calculating channel usage.

5. A method as recited in claim 2 wherein said measured signal quality is determined based on measurements of one of power of desired signal, channel noise and channel interference.

6. A method as recited in claim 1 wherein said channel efficiency is determined by the equation:

$$efficiency = \frac{\text{Actual Amount of data delivered}}{\text{Maximum Amount of Data That can be delivered with the same channel resource.}}$$

7. A method as recited in claim 1 wherein said weighting equation is given by:

$$W_i = efficiency_i^{exponent}.$$

8. A method as recited in claim 7 wherein the value of weight given said mobile station may be multiplied by a multiplier.

9. A method as recited in claim 7 wherein the value of weight given said mobile station may vary by a value given said exponent.

10. A method as recited in claim 9 wherein the value given said exponent is adjustable by an operator of said base station.

11. A method as recited in claim 1 wherein users with higher channel efficiency receive a higher weight than users with a lower channel efficiency.

12 A method as recited in claim 1 wherein users with higher channel efficiency receive a lower weight than users with a lower channel efficiency.

13. A method as recited in claim 1 wherein said wireless packet network comprises an EDGE system.

14. A method as recited in claim 1 wherein said packet scheduling step comprises the step of determining a choice of system modulation scheme among a high and low packet delivery rate.

15. A method as recited in claim 1 wherin said method is responsive to the step of receiving a request for a download of data from said mobile station.

16. A method as recited in claim 9 wherein a weight for said base station is determined according selecting a value of said exponent along a horizontal axis of values from a minimum of minus two to a maximum positive value.

17. A method as recited in claim 16 where the minimum value of exponent is set at minus one.

18. A method as recited in claim 1 wherein packets are delivered via time frames, each time frame comprising a plurality of time slots, said time slots being allocated to said station for packet delivery in accordance with a selection of a packet delivery scheme.

19. The method of claim 1 applied to both downlink, said base station to said mobile station, and uplink, said mobile station to said base station, operations.

20. Base station apparatus for use in a wireless packet network comprising a processor for calculating channel efficiency for a mobile station and scheduling packets for delivery to said mobile station by periodically determining a value of relative weight of said mobile station by a weighting equation, responsive to the calculated channel efficiency.

21. Base station apparatus according to claim 20 wherein said mobile station is provided with a packet queue and associated with said packet queue is a timer for timing packet delivery.

22. Base station apparatus according to claim 20 wherein channel efficiency is determined by the equation:

$$efficiency = \frac{\text{Actual Amount of data delivered}}{\text{Maximum Amount of Data That can be delivered with the same channel resource.}}$$

23. Base station apparatus according to claim 20 wherein said weight is determined by the equation:

$$W_i = efficiency_i^{exponent}.$$

24. Base station apparatus according to claim 20 wherein said apparatus is for use in an EDGE system.

25. Base station apparatus according to claim 20 wherein said base station is adapted to receive packets for delivery to mobile stations from a plurality of servers via the Internet.

26. Base station apparatus as recited in claim 23 wherein a weight for said base station is determined according to selecting a value of said exponent along a horizontal axis of values from a minimum of minus two to a maximum positive value.